

Vehicle Refueling Performance

Service Category Engine/Hybrid System

Section Fuel System

Market USA

Toyota Supports
 ASE Certification 

Applicability

YEAR(S)	MODEL(S)	ADDITIONAL INFORMATION
2020 - 2021	Highlander HV	Plant Code(s): S

Introduction

Some 2020 – 2021 model year Highlander Hybrid vehicles may exhibit one or more of the following conditions:

- The fuel gauge displays less than full when the fuel nozzle automatically clicks off.
- The total amount of fuel dispensed while refueling is less than expected when the fuel nozzle automatically clicks off.
- The Low Fuel warning light illuminates sooner than expected.

Additionally, the distance to empty mileage displayed in the Multi-Information Display (MID) may be less than expected. To address these concerns an updated fuel tank, fuel gauge bracket, and fuel sender gauge assembly were developed. Follow the procedures in this bulletin to address these conditions.

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Production Change Information

This bulletin applies to vehicles produced **BEFORE** the Production Change Effective VINs shown below.

MODEL	PLANT	PRODUCTION CHANGE EFFECTIVE VIN
Highlander HV	TMMI S1	5TDFARAH#MS012385 5TDYARAH#MS012385 5TDGARAH#MS012385 5TDZARAH#MS012385 5TDHARAH#MS012385 5TDHBRCH#MS012385 5TDLA3AH#MS012385 5TDDBRCH#MS012385 5TDEBRCH#MS069249 5TDDBRCH#MS069249 5TDXBRCH#MS069249 5TDHBRCH#MS069249 5TDLB3CH#MS069249 5TDGBRCH#MS069249 5TDBBRCH#MS069249 5TDFBRCH#MS069249
	TMMI S2	5TDYARAH#MS509630 5TDGARAH#MS509630 5TDHARAH#MS509630 5TDZARAH#MS509630 5TDHARAH#MS537119 5TDDBRCH#MS509630 5TDHBRCH#MS509630 5TDXBRCH#MS537119 5TDGBRCH#MS537119 5TDHBRCH#MS537119 5TDDBRCH#MS537119 5TDBBRCH#MS537119

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Warranty Information

OPCODE	DESCRIPTION	TIME	OFF	T1	T2
EG1919	R & R Fuel Sender Gauge, Fuel Gauge Bracket, and Fuel Tank Sub-assembly (Includes: Fuel Input Level Check, Draining Fuel Check)	2.7	77001-0E160	87	13
Combo A	Take the Vehicle to the Gas Station and Fill Until Fuel Pump Automatically Clicks Off	0.3			

Reimbursement for gasoline is NOT allowed on any type of warranty claim except courtesy deliveries and any applicable SSCs. Gasoline is a customer-pay item and should not be included in a warranty claim that does not allow for such an item. ANY claims submitted with a sublet for gasoline will be returned for correction, regardless of a DSPM authorization.

APPLICABLE WARRANTY

- **This repair is covered under the Toyota Basic Warranty. This warranty is in effect for 36 months or 36,000 miles, whichever occurs first, from the vehicle's in-service date.**
- **Warranty application is limited to occurrence of the specified condition described in this bulletin.**
- **Vehicles equipped with a California Certified Emission Control System that are registered and operated in California, Arizona (2012 model year only), Connecticut (starting with 2005 model year), Delaware (starting with 2014 model year), Maine (starting with 2004 model year), Maryland (starting with 2011 model year), Massachusetts (starting with 2004 model year), New Hampshire (2005 – 2009 model year only), New Jersey (starting with 2005 model year), New Mexico (2010 – 2011 model year only), New York (2004 – 2015 model year for ZEV models, starting in 2016 model year all models), Oregon (starting with 2008 model year), Pennsylvania (starting with 2008 model year), Rhode Island (starting with 2005 model year), Vermont (starting with 2004 model year), and Washington (starting with 2009 model year) – California Emission Long-term Defect Warranty is in effect for 7 years or 70,000 miles from the vehicle's in-service date, whichever occurs first. (Please reference Policy 4.7 for additional information.)**

Parts Information

PART NUMBER		PART NAME	QTY
PREVIOUS	NEW		
77001-0E160	77001-0E161	Tank Sub-assy, Fuel	1
77173-0E020	77173-0E021	Fuel Gauge Bracket	1
83320-0E060	83320-0E061	Gage Assy, Fuel Sender	1
77169-0R030		Gasket, Fuel Suction Tube Set	1

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Required Tools & Equipment

REQUIRED EQUIPMENT	SUPPLIER	PART NUMBER	QTY
Techstream ADVI*	ADE	TSADVUNIT	1
Techstream 2.0		TS2UNIT	
Techstream Lite		TSLITEPDLR01	
Techstream Lite (Green Cable)		TSLP2DLR01	

*Essential SST.

NOTE

- Only ONE of the Techstream units listed above is required.
- Software version 16.30.011 or later is required.
- Additional Techstream units may be ordered by calling Approved Dealer Equipment (ADE) at 1-800-368-6787.

SPECIAL SERVICE TOOLS (SST) & Equipment	PART NUMBER	QTY
Fuel Sender Lock Nut Wrench Set*	09808-14031-KIT	1

*Essential SST.

NOTE

Additional SSTs may be ordered by calling 1-800-933-8335.

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Diagnostic Procedure

1. Confirm the customer has refueled the vehicle just BEFORE the inspection.
2. Confirm the condition exists.
Does the vehicle exhibit one or more of the following conditions?
 - The fuel gauge displays less than full when the fuel nozzle automatically clicks OFF.
 - The total amount of fuel dispensed while refueling is less than expected when the fuel nozzle automatically clicks OFF.
 - The Low Fuel warning light illuminates sooner than expected.
 - **YES** — Continue to step 3.
 - **NO** — This bulletin does NOT apply. Continue diagnosis using the applicable Repair Manual.
3. Connect the vehicle to Techstream.
4. Using Techstream, check the fuel input reading by using the combination meter data list.
Is the fuel input level less than 14.9 gallons?
 - **YES** — Continue to step 5.
 - **NO** — Go to step 7.
5. Take the vehicle to a gas station and refuel the vehicle with the trigger fully depressed until the fuel nozzle automatically clicks OFF.
6. Using Techstream, check the fuel input reading by using the combination meter data list.
Is the fuel input level less than 14.9 gallons?
 - **YES** — Go to the Fuel Sender Gauge, Fuel Gauge Bracket, and Fuel Tank Replacement section.
 - **NO** — Continue to step 7.
7. Does the customer complaint include the refueling amount being less than expected?
 - **YES** — Continue to step 8.
 - **NO** — This bulletin does NOT apply. Continue diagnosis using the applicable Repair Manual.
8. Drain 11.5 gallons of fuel into an approved measurable container using the Techstream Fuel Pump Active Test, which can be found by entering the following menus:
Engine – Active Test – Fuel Pump.

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Diagnostic Procedure (continued)

9. Follow the procedure below to perform a meter reset.

NOTE

Ensure the vehicle is on level ground BEFORE performing meter reset.

- A. Use the odometer or trip button to change the meter display to odometer.
- B. Turn the vehicle OFF.
- C. Hold the odometer or trip button and turn the ignition to the IG-ON position (NOT engine ON).
- D. Continue holding the odometer or trip button for approximately five seconds. The odometer mileage will flash to confirm the reset was successful.
- E. Is the Low Fuel warning light illuminated?
 - **YES** — Continue to the Fuel Sender Gauge, Fuel Gauge Bracket, and Fuel Tank Replacement section.
 - **NO** — This bulletin does NOT apply. Continue diagnosis using the applicable Repair Manual.

NOTE

If this bulletin does NOT apply, refuel the vehicle with the drained fuel AFTER the diagnosis is complete.

Fuel Sender Gauge, Fuel Gauge Bracket, and Fuel Tank Replacement

If a repair is necessary, the fuel sender gauge, fuel gauge bracket, AND fuel tank assembly MUST be replaced.

NOTICE

- Do NOT damage the wire harness.
- Do NOT damage the cam lock retainers.
- When disengaging each wire harness from the clamp, disengage one wire at a time.

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Fuel Sender Gauge, Fuel Gauge Bracket, and Fuel Tank Replacement (continued)

1. Remove the fuel tank.

Refer to TIS, applicable model and model year Repair Manual:

- 2020 – 2021 Highlander HV:
Engine/Hybrid System – Fuel System – [“A25A-FXS \(Fuel\): Fuel Tank: Removal”](#)

2. Replace the fuel sender gauge and fuel gauge bracket.

- A. Remove the fuel sender gauge and fuel gauge bracket.

Refer to TIS, applicable model and model year Repair Manual:

- 2020 – 2021 Highlander HV:
Engine/Hybrid System – Fuel System – [“A25A-FXS \(Fuel\): Fuel Sender Gauge Assembly: Removal”](#)

- B. Install the NEW fuel sender gauge and fuel gauge bracket onto the NEW fuel tank.

Refer to TIS, applicable model and model year Repair Manual:

- 2020 – 2021 Highlander HV:
Engine/Hybrid System – Fuel System – [“A25A-FXS \(Fuel\): Fuel Sender Gauge Assembly: Installation”](#)

3. Install the NEW fuel tank.

Refer to TIS, applicable model and model year Repair Manual:

- 2020 – 2021 Highlander HV:
Engine/Hybrid System – Fuel System – [“A25A-FXS \(Fuel\): Fuel Tank: Installation”](#)

4. Put any drained fuel back into the vehicle and take the vehicle to a gas station to refuel with the trigger fully depressed until the nozzle automatically clicks off.

5. Confirm the condition no longer exists.